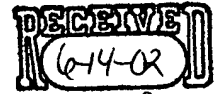


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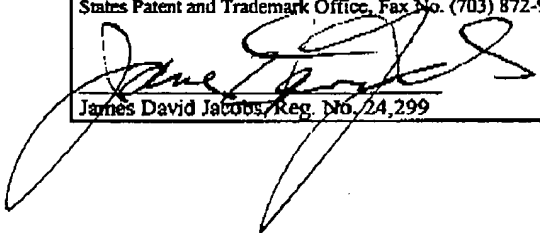
PATENTSIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas Huntington Wood  
Serial No.: 09/332,264  
Filed: June 11, 1999  
Examiner: Shi K. Li  
Group Art Unit: 2633  
Title: KEY SEGMENT SPOTTING IN VOICE MESSAGES

Official



I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703) 872-9314 on June 14, 2002.

  
James David Jacobs, Reg. No. 24,299

June 14, 2002  
Date

BOX NON-FEE AMENDMENT  
Commissioner for Patents  
Washington, D.C. 20231

REMARKS

S I R :

These remarks are being filed in response to the office action mailed March 14, 2002. In that office action the Examiner rejected all the pending claims, claims 1 - 15. As more fully explained below the claims as filed are patentable over the cited prior art. Accordingly, reconsideration of the application is respectfully requested and an early allowance is solicited.

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The present application discloses a system for enabling upstream Ethernet communications over a PON. In a preferred embodiment, multiple upstream logical busses are created using Subcarrier Multiple Access (SCMA) in which each ONU is assigned a different subcarrier frequency. Instead of transmitting its upstream data with baseband signaling, each ONU modulates an RF carrier at its assigned subcarrier frequency with its data. Techniques such as frequency-shift keying (FSK) or quadrature phase-shift keying (QPSK) can be used to modulate the subcarriers. As long as the information bandwidths of the various upstream signals do not overlap, each ONU thus has its own logical bus, and can transmit to the head-end at any time without fear of colliding with signals from another ONU.

The Examiner rejected claim 1 under 35 U.S.C. as being unpatentable over Bohn et al. in view of Manchester et. al. The Examiner conceded that Bohn et al. "does not specify whether the user data is in packet format or not ...." The Examiner then stated that Manchester et al. teaches standard ways to send packets over a "SONET data format" (emphasis added) and argued that "it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use packet over SONET (or OC-N) standard to send user data in packet format ...."

As the Examiner recognized in the rejection SONET is a "data format" (protocol) that permits multiplexing multiple communications over a PON. However, the present invention does

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not use SONET, or some other protocol, to enable Ethernet communication over a PON. Rather the present invention permits Ethernet communication over the PON through the following claimed elements:

a first network unit, the first network unit being coupled to the splitter via a first of the plurality of drop fibers, wherein the first network unit receives a first upstream data stream from a first user source in a packet format, modulates a first signal with the first upstream data stream and transmits the modulated first signal to the head-end via the outside plant; and

a second network unit, the second network unit being coupled to the splitter via a second of the plurality of drop fibers, wherein the second network unit receives a second upstream data stream from a second user source in a packet format, modulates a second signal with the second upstream data stream and transmits the modulated second signal to the head-end via the outside plant....

To use SONET in the claimed invention would render the above elements redundant. Accordingly, rather than teaching the present invention to a person of ordinary skill in the art, when combined with Bohn et al., Manchester et al. teaches away from the present invention. That is, Manchester et al. teaches the need to use SONET.


If only for this reason claim 1 is patentable over Bohn et al. in view of Manchester et al. Similarly, since claims 2 - 15 all depend either directly or indirectly from claim 1, which is allowable, claims 2 -15 are also allowable. Reconsider of the rejection is requested.

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If a telephone interview would be of assistance in advancing prosecution of the subject application, Applicants respectfully request that the Examiner telephone the number provided below.

Respectfully submitted,

Date: June 14, 2002



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